epiTRENDS

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Many Adults Fail to Keep Up-to-Date on Immunizations; Education Efforts and Better Data Tracking are Needed

Successful campaigns to increase rates of childhood immunization in Washington are now prompting public health advocates to focus more attention on an often neglected population — adults. Many adults don't realize that they are not up-to-date on their immunizations and also don't recognize the importance for disease prevention. Each year in the United States from 50,000 to 70,000 adults die needlessly from vaccine-preventable diseases or their complications.

While it seems likely that Washington will be close to, if not exceed, the national goal to immunize 60% of adults over age 65 against influenza in 2000, the state's percentage of pneumococcal vaccinations is lower. However, even getting a handle on accurate data regarding adult immunization is a challenge and reported rates may be overestimates.

About 70% of adults aged 65 and older who responded to Washington's 1997 Behavioral Risk Factor Surveillance Systems (BRFSS) telephone survey reported that they had received an influenza vaccine during the past 12 months; only 52% indicated they had received the pneumococcal vaccine. According to 1997 Medicare billing data, however, only 45% of Washington fee-for-service beneficiaries had a claim paid for influenza vaccine.

The Medicare billing data, which are known to be incomplete, and the BRFSS survey conducted annually by the Department of Health (DOH) and the Centers for

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TICKS: Carriers of Nasty, Often Misdiagnosed Diseases

Several tick-borne diseases occur in Washington and others may be encountered during travel elsewhere. Tick bites and potential exposure in tick habitats during the warmer months increase the risk of these diseases.

Lyme disease is the most commonly reported tick-borne disease nationwide and the best known locally. Between 10 and 40 cases of Lyme disease are reported annually in Washington, compared to hundreds or thousands of cases in some northeastern and midwestern states. Early Lyme disease has flu-like symptoms (e.g., headache, fever) that may be accompanied (but not always) by a target-like rash. Disseminated or chronic disease may involve Bell's palsy, arthritis, and neurologic or cardiac problems. Two-stage laboratory testing includes ELISA followed by Western blot.

Tick vectors are of two types: hard-bodied ticks (*Ixodes and Dermacentor*) that attach to animals and humans for days, and soft-bodied ticks (*Ornithodoros*) that attach and feed only briefly. All stages of *Ixodes pacificus* (deer tick), and possibly other *Ixodes* species, can transmit the *Borrelia* spirochete, which causes Lyme disease. *Ixodes* ticks are found in Western Washington and the eastern slopes of the Cascade Mountains. The prevalence of *Borrelia* carriage by *Ixodes* ticks in Washington is unknown but may be similar to the 1–3% rate reported in other western states.

Relapsing fever is carried by soft ticks that live in rodent nests found in woodpiles and cabins. Patients often have no recollection of tick exposure because the ticks feed for just a short time at night. Symptoms are flu-like with weekly high fevers up to 104°F. Although less than 12 cases are typically reported each year in Washington,

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Tick-borne Diseases *(from page 1)*

it is likely that many more infections occur. All relapsing fever cases reported in Washington from 1980 to 1995 have occurred east of the Cascades.

Ehrlichiosis and babesiosis are two additional tick-borne illnesses that have been identified in Washington but remain poorly understood. Ehrlichiosis is also a flu-like illness with reduction in all blood cells (pancytopenia) and elevated liver function tests. Babesiosis can be asymptomatic or result in severe hemolytic anemia and adult respiratory distress syndrome. The illness may be incorrectly diagnosed as malaria. A unique *Babesia* species has been found in two patients from Washington State. The first locally acquired case was reported in 1991. A second case in 1994 was transmitted via blood transfusion from an infected but asymptomatic donor. *Ixodes* ticks are the vector for ehrlichiosis and babesiosis in other regions of the United States.

Finally, rare cases of tick paralysis and Rocky Mountain spotted fever have been reported in Washington. Most cases of tick paralysis occur in Eastern Washington. Removing the tick reverses the ascending paralysis.

The Department of Health is coordinating an effort to describe the distribution of tick species in the state. If sufficient laboratory support is available, DOH also will attempt to determine the prevalence of human pathogen carriage for several tick-borne diseases.

For additional information, please contact John Grendon at DOH: Tel. 360-236-3363, Fax 360-236-2257, or by e-mail at jhg0303@d0h.wa.gov. ◆

For More Information

Contact Constance Strahle, adult immunization coordinator of the DOH Immunization Program, 360-236-3556, or by e-mail, cls1303@doh.wa.gov; or Dr. Henry Mustin of the Immunization Action Coalition by e-mail at WAPRO.HMUSTIN@sdps.org. Call 206-364-9700 if you wish to join the coalition of more than 300 members from public, private and nonprofit sectors.

Adult Immunization *(from page 1)*

Disease Control and Prevention, are the only methods now available to measure adult immunization rates in Washington. The BRFSS results are biased because they are based on self-reports by those willing to complete the survey and may overestimate immunization levels. More collaboration is needed among the Department of Health, service providers, and insurers to develop and implement record-keeping systems and reporting systems to help measure and sustain targeted immunization levels.

TABLE 1: Facts about adult immunization in the United States

- Each year 10–20% of the U.S. population is infected with influenza at an estimated cost to society of at least $12 billion during severe epidemics.
- Pneumonia and influenza account for the fifth leading cause of death for older adults.
- Pneumococcal pneumonia annually accounts for about 500,000 cases of pneumonia, 50,000 cases of bacteremia, and 3,000 cases of meningitis.
- Hepatitis A strikes an estimated 94,000 Americans every year and is the most common vaccine-preventable disease in travelers.
- Hepatitis B infects 100–140,000 Americans annually including thousands of adolescents and young adults. Up to 1.25 million Americans have chronic hepatitis B infections and can infect household members and sexual partners.
- As many as 12 million women of childbearing age are susceptible to rubella. If infection occurs during pregnancy it can result in severe birth defects, miscarriages, and stillbirths.
- Up to half of Americans over age 50 are inadequately immunized against tetanus and diphtheria.

Campaign to Increase Rates

Many adults are not well-informed about the vaccines available to prevent common illnesses and their complications, including death. The DOH Immunization Program, with the support of the Immunization Action Coalition of Washington (IACW) and local public health districts is leading the effort to develop a public awareness campaign and to collaborate with service providers. The goal is to increase adult immunization rates as follows:

- influenza vaccine for persons aged 65 and older and those with high-risk profiles including chronic pulmonary and cardiac diseases, and women who will be in the second or third trimester of pregnancy during flu season;
- pneumococcal vaccine for persons aged 65 and older or with high-risk profiles;
- hepatitis A and hepatitis B vaccines among high-risk populations;
- tetanus vaccine boosters every 10 years for all adults; and
- screening and appropriate vaccinations for measles/mumps/rubella (MMR), chicken pox, and hepatitis B for women in child-bearing years.

Also, travelers going abroad should receive vaccinations advised for specific regions.

For the full schedule of recommended adult vaccines, consult the Web sites listed under WWW Access Tips on page 4.

Monthly Surveillance Data by County

March 1999* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead§#
Adams	0	0	0	1	0	0	0	0	0	2	0	0	1	0/#
Asotin	0	0	1	0	0	0	0	0	0	2	0	1	0	0/0
Benton	0	0	0	0	0	0	0	0	1	34	0	0	2	0/11
Chelan	0	0	0	0	0	0	0	0	1	19	1	0	1	1/5
Clallam	0	0	0	0	0	0	0	0	0	13	0	1	0	0/0
Clark	2	7	0	2	0	0	2	2	2	54	13	0	0	0/#
Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Cowlitz	0	1	0	4	2	0	0	0	0	5	1	0	0	3/27
Douglas	0	0	0	0	0	0	0	0	0	10	1	0	0	0/0
Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Franklin	0	0	0	0	0	0	0	0	1	17	0	0	1	0/0
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	0	0	2	0	0	0	1	0	32	2	0	0	0/#
Grays Harbor	0	0	0	0	0	0	1	0	0	7	0	0	0	1/#
Island	0	0	0	0	0	0	0	3	0	11	1	0	0	0/#
Jefferson	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
King	0	10	1	3	2	0	1	163	8	420	96	14	3	6/43
Kitsap	0	0	0	0	0	0	0	0	0	40	4	1	0	1/14
Kittitas	0	0	0	0	0	0	0	0	0	1	0	0	0	0/#
Klickitat	0	0	0	0	0	0	0	0	0	4	0	0	0	0/0
Lewis	0	0	0	0	0	0	0	0	0	0	0	0	0	0/#
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Mason	0	0	0	0	0	0	0	0	0	7	2	0	0	0/0
Okanogan	0	0	0	0	0	0	0	1	0	5	0	0	0	0/0
Pacific	0	0	0	0	0	0	0	0	0	1	0	0	0	0/#
Pend Oreille	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Pierce	1	10	2	5	0	0	1	22	7	189	67	4	0	3/83
San Juan	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Skagit	0	0	0	0	0	0	2	0	0	20	2	0	0	0/#
Skamania	0	0	0	0	0	0	1	0	0	1	0	0	0	0/0
Snohomish	0	4	1	2	1	0	0	4	1	98	7	2	0	0/10
Spokane	0	4	0	1	0	0	0	0	1	57	6	1	2	0/174
Stevens	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Thurston	0	1	0	1	0	0	0	1	1	21	1	0	0	1/5
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Walla Walla	0	0	0	0	0	0	0	0	0	2	0	0	0	0/13
Whatcom	0	0	0	1	2	0	0	0	0	28	1	2	1	0/#
Whitman	0	0	0	1	0	0	1	0	0	1	0	0	1	0/0
Yakima	0	3	2	3	0	0	2	2	0	90	3	1	2	0/11
Unknown														1/7
Current Month	3	40	7	26	7	0	11	199	23	1199	208	27	14	17/421
March 1998	8	54	5	97	14	3	7	35	17	908	154	61	23	10/374
1999 to date	4	74	16	74	9	2	17	210	63	3121	541	80	41	36/1043
1998 to date	10	61	10	147	19	5	23	64	46	2517	437	127	38	28/919

* Data are provisional based on reports received as of March 31, unless otherwise noted.

† Unconfirmed reports of illness associated with pesticide exposure.

§# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.

Update on Review of Notifiable Conditions Reporting Process

WWW Access Tips

Recommendations for adult immunization are found on the following Web sites: http://www.immunize.org/catg.d/p2011b.htm, or for camera-ready copy, use the same address but substitute pdf for htm.

Medscape hosts the Web site of the National Coalition for Adult Immunization at http://www.medscape.com/Affiliates/NCAI/

The Web site for the Centers for Disease Control and Prevention provides information on required or recommended immunizations for travel abroad: http://www.cdc.gov

Eliminating confusion from the notifiable conditions regulations and streamlining the reporting process are the two primary goals for updating the regulations. These goals emerged during phase two of the project, in which representatives of the Notifiable Conditions Work Group met over the past nine months with more than 150 groups of health care practitioners, laboratorians, and others in public health forums. These meetings generated constructive feedback about the proposed list of notifiable conditions and aired and resolved administrative issues surrounding the reporting process.

Among the chief lessons learned is that the state has created too many separate systems for receiving notifiable conditions reports. The revised regulations will endeavor to synchronize these systems to make the entire process less confusing for the reporter. The work group believes that if the systems for reporting are compatible and the process is less confusing, system performance will improve.

The next phase of the project will focus on finalizing the list of notifiable conditions and preparing draft rules, which should be available in early summer. For further information, or if you wish to be become more involved in this project, please contact Greg Smith at (360) 236-3704 or by e-mail at gts0303@doh.wa.gov.

MEDWATCH Encourages Reporting of Adverse Reactions and Events

The Food and Drug Administration maintains a voluntary reporting system known as MEDWATCH to gather information on severe events associated with medications, medical devices, nutritional supplements, or other FDA-regulated products. Severe events include death, hospitalization, significant or permanent disability, or necessity of medical or surgical intervention. Reporting forms are available by telephone or the Internet and reports can be submitted by mail (MEDWATCH, 5600 Fishers Lane, Rockville MD 20852-9787, or by telephone (800-FDA-1088), fax (800 FDA-0178), or Internet (www.fda.gov.medwatch).

WSPHA Calls for Abstracts for 1999 Joint Conference on Health

The Washington State Public Health Association is requesting abstracts for its Sixth Annual Joint Conference on Health to be held October 4–6, 1999 in Spokane. The conference theme is "Connecting Science and Practice for Healthy People, Healthy Communities." The submission dates are May 7 for oral presentations and July 30 for poster abstracts.

Abstracts must be submitted in electronic format. For more information visit the WSPHA Web site, http://www.businesslink.com/wspha or contact one of the following conference organizers: program co-chairs Frank Westrum (360-236-4438, fmw0303@doh.wa.gov) or Linda Jackson (509-324-1538, ljackson@spokanecounty.org) or coordinator Kay DeRoos (206-362-4728, or dero101@cdc.gov).

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